Chapter 1

Introduction

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Chapter 1
Introduction

This document is an environmental impact statement/environmental impact report (EIS/EIR) analyzing the effects of issuing state and federal incidental take permits and entering into a streambed alteration agreement to enable the Pacific Gas and Electric Company to continue its San Joaquin Valley operations and maintenance programs in conformity with the requirements of federal and state endangered species laws and the California Fish and Game Code. It has been prepared in compliance with the National Environmental Policy Act (NEPA) and California Environmental Quality Act (CEQA), and is intended to disclose potential environmental effects and enable the public and regulatory agencies to comment on the proposed program of activities and alternative approaches. The U.S. Fish and Wildlife Service (USFWS) is serving as the lead agency for NEPA compliance and the California Department of Fish and Game (DFG) is the lead agency for CEQA compliance.

Background

The Pacific Gas and Electric Company (PG&E) is the largest publicly traded electric and gas utility in the United States, serving more than 4.8 million electricity customers and 4 million natural gas customers in 48 of California's 58 counties. Almost one-third of PG&E's 70,000–square mile service area, and a substantial proportion of its electricity and gas transmission infrastructure, lies within nine San Joaquin Valley counties: San Joaquin, Stanislaus, Merced, Fresno, Kings, Kern, Mariposa, Madera, and Tulare.

PG&E's existing infrastructure requires ongoing maintenance to ensure reliable delivery of electricity and gas service. The company's operations and maintenance (O&M) program includes a wide variety of activities, some of which have some potential to result in disturbance, injury, or mortality of wildlife listed as endangered or threatened under the federal and/or state Endangered Species Acts (ESAs). Such "take" of listed species is strictly regulated. To date, O&M activities have not been substantially constrained by ESA restrictions; however, because additional species continue to be listed as threatened or endangered, thus becoming subject to ESA protections, PG&E has entered into discussions with USFWS to develop an approach that will allow its essential O&M activities to continue while maintaining the program in full compliance with the federal and state ESAs.

Provisions of Section 10[a][1][b] of the federal ESA establish a process through which a "nonfederal entity" (a business or individual) can apply for a permit allowing take of federally listed species under certain, restricted circumstances.[1] The permit is issued by the USFWS and/or National Marine Fisheries Service (NMFS), depending on the species involved. A key requirement for issuance of a Section 10[a][1][b] permit is preparation of a conservation plan, commonly referred to as a *habitat conservation plan* or HCP. The HCP must fully analyze the effects of the proposed take, and describe the measures that will be taken to avoid, minimize, and compensate for it.

PG&E began informal consultation with USFWS in the mid-1990s. This effort was inconclusive, and discussion was reinitiated in 2001. Based on the outcome of these conversations, PG&E has been working with USFWS to prepare an HCP covering its San Joaquin Valley O&M activities. The draft HCP document is currently available for public review, and is included as Appendix B of this EIS/EIR. When it is finalized, PG&E hopes to obtain a Section 10 permit authorizing take of listed species as a corollary of its San Joaquin Valley O&M program.[2] The USFWS decision regarding issuance of a Section 10 permit to PG&E will constitute a federal action subject to the provisions of NEPA, which requires that federal agencies consider and disclose the environmental consequences of their actions, including permitting and funding the activities of other entities. Where those consequences may be significant, NEPA requires preparation of an EIS.[3]

PG&E also plans to use the HCP to apply for a state take permit under Section 2081 of the California Fish and Game Code, which regulates take of species listed under the California ESA; and to support its application for a streambed alteration agreement under Section 1602 of the California Fish and Game Code, to ensure authorization of any O&M activities that may affect the bed or banks of natural watercourses. Much like NEPA, CEQA requires that state agencies analyze and disclose the environmental impacts of their discretionary activities, specifically calling for the preparation of an EIR when impacts may be significant; CEQA compliance is required because DFG will exercise discretionary (decision-making) authority in reviewing PG&E's applications for a Section 2081 permit and streambed alteration agreement.

[1] To be permissible under ESA Section 10[a][1][b], take must occur as a corollary of otherwise lawful activities, and may not be the purpose of the activities; this is referred to as *incidental take*.

[2] The HCP includes analysis of potential effects on migratory birds, and the federal incidental take permit, if issued, will also be used to request a Special Purpose Permit consistent with Section 21.27 of the federal Migratory Bird Treaty Act (see additional discussion under *Regulatory Context* in Chapter 5).

[3] An EIS is also required for projects whose environmental effects are highly controversial; for policy or regulation changes that substantially alter federal agency programs; and for programs that allocate agency resources essential to future actions (40 CFR 1502.4).

Joint Compliance Approach

This document has been prepared as a combined EIS/EIR for "joint" compliance with NEPA and CEQA. When a project is subject to review under both NEPA and CEQA, state and local agencies are encouraged to cooperate with federal agencies in the preparation of joint environmental documents. Joint environmental documents must fulfill the procedural and content requirements of both NEPA and CEQA; an important advantage of joint compliance is that it streamlines the environmental review process by satisfying both laws with a single document, while providing full opportunity for the public and agencies to comment on the proposed activities.

For simplicity, this document uses NEPA terminology; Table 1-1 shows the correspondence between key federal (NEPA) and state (CEQA) terms.

Table 1-1. Correspondence between Key National Environmental Policy Act and California Environmental Quality Act Terms

NEPA Term (Federal)	CEQA Term (California)
Lead Agency	Lead Agency
Cooperating Agency	Responsible Agency
Environmental Assessment	Initial Study
Finding of No Significant Impact	Negative Declaration
Environmental Impact Statement	Environmental Impact Report
Notice of Intent	Notice of Preparation
Notice of Availability	Notice of Completion
Record of Decision	Findings
Proposed Action	Proposed Project
No Action Alternative	No Project Alternative
Environmentally Preferable Alternative	Environmentally Superior Alternative
Purpose and Need	Project Objectives
Environmental Consequences	Environmental Impacts
Affected Environment, Existing Conditions	Environmental Setting

Overview of PG&E Facilities in San Joaquin Valley Area

Natural Gas System

PG&E's natural gas system includes transmission pipelines, compressor stations, regulator stations, and distribution pipelines. The transmission system consists of large-diameter trunk lines that convey substantial volumes of natural gas at high pressure; pressure is maintained by compressor stations located at widely spaced intervals along the lines. Gas is distributed to individual home and business customers via smaller, lower-pressure distribution pipelines, transitioning from high-pressure lines to smaller, low-pressure lines via pressure regulators or pressure-limiting stations. Statewide, PG&E owns more than 5,700 miles of high-pressure transmission pipelines; 59 compressors at 17 stations; and more than 35,000 miles of gas distribution pipelines.

PG&E currently has a total of approximately 1,550 linear miles of transmission pipeline in the San Joaquin Valley, the largest of which include

- **Line 401**, which is 426 miles long, running south from the California/Oregon border to PG&E's Panoche Metering Station in Fresno County;
- **Line 2**, which is 115 miles long and connects the Panoche Metering Station with the Brentwood Compressor Station; and
- **Lines 300A and B**, which are 502 mile–long dual pipelines that cross the California/Arizona border near Needles, California to access PG&E's Milpitas Terminal in the San Francisco Bay Area.

Transmission pipelines range from 8 to 42 inches in diameter and are typically buried at depths of 3–4 feet below ground. Pressure in these lines generally exceeds 60 pounds per square inch (psi).

PG&E's San Joaquin Valley distribution system comprises some 8,326 miles of steel and plastic lines, about 90% of which is located in urban areas. Gas distribution lines range from 0.75 inch to 8 inches in diameter and are typically buried 2–4 feet deep. Pressure in distribution pipelines is generally less than 60 psi.

The right-of-way (ROW) that accommodates the natural gas system ranges from 15 to 100 feet wide. Less than 1% of the ROW's length is owned in fee title; the overwhelming majority is in easements and in franchise. For the most part, PG&E has nonexclusive easements without the right to fence the pipeline corridors. Exclusive easements with the right to construct fences are obtained when security fencing is required for valve lots, compressor stations, and other facilities.

Electrical System

PG&E's electrical system consists of transmission lines, distribution lines, and switching stations or substations. Statewide, the PG&E system comprises about 18,450 miles of interconnected transmission lines; about 105,500 miles of distribution lines; and 1,014 substations. High-voltage (50–500 kilovolts [kV]) transmission lines convey power from generation plants to switching stations or substations, where power is redirected and transformed to lower voltages. Distribution lines then carry the lower voltage (12 kV or 21 kV) service for delivery to industries, businesses, and homes. Pole-mounted or pad-mounted transformers further reduce the voltage for normal household and business use.

In the San Joaquin Valley, PG&E's electrical transmission system consists of approximately 4,588 miles of transmission lines, typically carried on tubular steel lattice towers. Bulk transmission voltages (230 kV and 500 kV) are carried by conductors (wires) supported on steel lattice towers or steel poles. Conductors carrying subtransmission voltages (60 kV, 70 kV, and 115 kV) are supported by steel towers, tubular steel poles, or wood poles. The spacing of these structures varies. The height of conductors above the ground also varies according to topography and the design of the transmission system. Generally, conductors on 230-kV and 500-kV systems are designed to maintain a minimum height of 30 feet above the ground. Most transmission ROWs (99% by length) are located within easements negotiated with private landowners or the holders of public lands; only 1% is owned in fee title by PG&E. Transmission ROW widths depend on the system voltage, number of lines per ROW, terrain, and other factors.

PG&E presently owns approximately 20,549 miles of overhead distribution lines and 3,987 miles of underground distribution lines in the San Joaquin Valley. Distribution conductors are carried on wood or steel poles. *Primary distribution lines* carry three-phase AC power in the 2–50 kV range to street rail and bus systems, as well as industrial and commercial customers. *Secondary distribution lines* serve most residential customers with 120/240-volt, single-phase, three-wire service, which provides electric power for most appliances.

The width of PG&E's distribution ROWs varies depending on topography, system voltage, and other factors. Most distribution ROWs are accommodated in easements on privately owned lands.

Proposed Action and Activities Analyzed in this EIS/EIR

Overview

As described above, PG&E proposes to use the HCP it is currently developing to apply for federal and state permits authorizing take of listed species as a result of

its San Joaquin Valley O&M program, and to support development of a streambed alteration agreement to regulate O&M activities that may affect the bed or banks of natural drainages.[4] The activities entailed under the O&M program are authorized and/or mandated by the California Public Utilities Commission (CPUC), which has sole jurisdiction over PG&E. However, the lead agencies must now evaluate the potential effects of those activities in making their permit decisions.

USFWS has full discretionary authority over the issuance of Section 10 permits, and, having consulted with PG&E and reviewed the HCP, could choose not to approve it, in which case no Section 10 permit would be issued. Similarly, following its review, DFG could elect to deny a state take permit and/or master streambed alteration agreement, or could decide not to approve the HCP implementation agreement. In order to fully analyze the potential environmental outcomes, this EIS/EIR assumes that the HCP will be approved, federal and state take permits will be issued, and a master streambed alteration agreement will be enacted. However, this document uses the language "proposed action" to emphasize the discretionary nature of the key federal and state approvals as well as the need to complete the NEPA and CEQA review processes.

Based on the assumptions discussed above, the proposed action would include the following components.

- Federal components:
  - approval of HCP and HCP implementation agreement,
  - issuance of incidental take permit.
- State components:
  - approval of HCP implementation agreement,
  - issuance of Section 2081 incidental take permit,
  - entry into master streambed alteration agreement with PG&E.

Together, assuming that PG&E's applications for take permits and a streambed alteration agreement are approved, the federal and state components of the proposed action would enable PG&E to continue its existing program of O&M activities in a lawful manner. They would also implement the HCP and commit PG&E to a program of environmental and conservation measures to avoid, minimize, and mitigate the effects of incidental take. Accordingly, this EIS/EIR analyzes two categories of activities:

[4] DFG anticipates that the streambed alteration agreement will take the form of a program-scale master agreement extending for the 30-year duration of the HCP and permit term and covering all O&M and minor construction activities enabled under the proposed action. The term *master streambed alteration agreement* is accordingly used in this EIS/EIR. DFG is currently revising the draft streambed alteration agreement to reflect the latest updates to the California Fish and Game Code.

1. PG&E's ongoing O&M and minor new construction activities, and
2. new environmental commitments and mitigation measures required under the terms of the HCP and the HCP implementation agreement.

These activities are described in detail in Chapter 2 (*Proposed Action and Alternatives*).

Purpose and Need, Goals and Objectives

NEPA requires an EIS to briefly describe the underlying purpose and need for a proposed federal action. CEQA embodies a similar requirement for an EIR to contain a statement of the goals and objectives a project is proposed to meet. The following paragraphs present the NEPA purpose and need and CEQA goals and objectives for the proposed action, as identified by USFWS and DFG.

The purpose of the proposed action is to respond to PG&E's application for federal and state incidental take permits under Section 10[a][1][B] of the federal Endangered Species Act, Section 2081 of the California Endangered Species Act, and all implementing regulations and policies for 42 wildlife and plant species that are state- or federally listed as threatened or endangered and 23 additional species that are not yet listed, but that may become listed during the term of the permit, collectively referred to as the *covered species*.

Activities proposed by PG&E for the operation and maintenance of their existing gas and electrical facilities throughout the San Joaquin Valley could result in the take of individuals belonging to covered species. In the absence of a permit—and the conservation planning entailed by the permit review process—take would violate the federal and California Endangered Species Acts. Thus, the proposed action is needed to ensure compliance with the federal and California Endangered Species Act, as well as NEPA, CEQA, and other applicable federal and state laws and regulations, while allowing PG&E to continue a program of O&M activities essential to the reliable delivery of electricity and gas service to some 4 million customers in their California service area.

Consistent with the identified need, the goal of the proposed action is to review PG&E's permit applications under the federal and California Endangered Species Acts and make a permitting decision, in order to protect, conserve, and enhance the covered species and their habitats for the continuing benefit of the people of the United States. Specific objectives include the following.

- Provide a means and take steps to conserve the ecosystems depended on by covered species.
- Ensure the long-term survival of the covered species through protection and management of the species and their habitats.
- Ensure that take of covered species is avoided and minimized to the maximum extent feasible and is fully compensated for by appropriate mitigation measures.

Lead, Cooperating, and Responsible Agencies

As identified above, USFWS is the lead agency for NEPA compliance and DFG is the lead agency for CEQA compliance for the proposed action.

The following agencies have been identified as *cooperating agencies* under NEPA—that is, additional federal agencies with legal jurisdiction over the project and/or expertise regarding its potential environmental effects.

- Bureau of Land Management.
- Department of Housing and Urban Development.
- Environmental Protection Agency.
- NMFS.
- U.S. Army Corps of Engineers.

Responsible agencies under CEQA—additional agencies with approval or funding responsibility for the proposed action—include the following.

- CPUC.
- Central Valley Regional Water Quality Control Board.
- Counties of Fresno, Kern, Kings, Madera, Mariposa, Merced, San Joaquin, Stanislaus, and Tulare.
- California Department of Transportation, Districts 6 and 10.
- Native American Heritage Commission.
- San Joaquin Valley Air Pollution Control District, Kern County Air Pollution Control District, and Mariposa County Air Pollution Control District.

Required Permits and Approvals

CPUC Jurisdiction

The California Constitution vests in the California Public Utilities Commission (CPUC) exclusive power and authority with respect to "all matters cognate and germane to the regulation of public utilities" (Cal. Const., Art. XII, Sec. 5; *Pacific Telephone & Telegraph v. Eshleman* [1913] 166 Cal. 640, 652–660). The California Public Utilities Commission (CPUC) thus has sole authority over the siting, design, operation, and maintenance of PG&E facilities.

Natural gas infrastructure is regulated under CPUC General Order 112-E, which is intended to augment federal Pipeline Safety Regulations by providing further minimum requirements

> for the design, construction, quality of materials, locations, testing, operations and maintenance of facilities used in the gathering, transmission and distribution of gas and in liquefied natural gas facilities to safeguard life or limb, health, property and public welfare and to provide that adequate service will be maintained by gas utilities operating under the jurisdiction of the commission [CPUC].

Electrical utility facilities are regulated under General Order 131-D, which is similarly aimed at ensuring safety and reliability of service, and establishes several avenues for project review and approval, depending on the nature of the project.

The California Constitution (Art. XII, Sec. 8) explicitly prohibits municipalities regulating "matters over which the Legislature grants regulating power to the Commission [CPUC]." As a result, CPUC's jurisdiction preempts the discretionary[5] authority of local jurisdictions over gas and electrical facilities. However, all projects subject to General Orders 112-E and 131-D are required to comply with local ministerial[6] permitting requirements, along with all relevant all state and federal regulations and permitting requirements.

Additional State and Federal Regulatory Framework

In addition to the provisions of the federal and state Endangered Species Acts, the California Fish and Game Code, NEPA, and CEQA, the activities analyzed in this EIS/EIR may be subject to a wide range of other environmental compliance requirements. Briefly, these include the following.

- The federal Migratory Bird Treaty Act.
- Requirements of the federal Clean Water Act regarding discharge of stormwater from construction sites.
- Federal Clean Water Act stipulations regarding placement of fill materials in jurisdictional waters of the United States.

[5] A *discretionary* decision is one that requires require a public agency to exercise judgment or deliberation in deciding to approve or disapprove a proposed activity, as distinguished from situations where only needs to determine whether a proponent has complied or conformed with applicable statutes, ordinances, or regulations (CEQA Guidelines Sec. 15357). Examples of discretionary decisions include passage of new laws and ordinances; approval and revision of planning documents such as General Plans, Specific Plans, HCPs, Timber Harvest Plans, etc.; and approval of proposals for new public facilities and many private developments.

[6] A *ministerial* decision is one that is mandated by existing laws, regulations, statutes, or procedures, and thus involves little or no personal, subjective judgment by public officials or agencies. Examples include issuing automobile registrations, dog licenses, and marriage licenses. A grading or building permit is ministerial if the ordinance requiring the permit limits the public official to determining whether zoning allows the structure to be built in the requested location, whether the structure would meet applicable building codes, and whether the applicant has paid the required fee (CEQA Guidelines Sec. 15369).

- Requirements of local jurisdictions' grading and construction permitting processes (note that issuance of grading and building permits is typically a ministerial action).
- Federal and state protection of cultural and paleontological resources, including the National Historic Preservation Act and Native American Graves Protection and Repatriation Act, and Executive Orders regarding tribal assets.
- Federal environmental justice regulations.
- Federal and state air quality regulations.

USFWS is also subject to the federal Administrative Procedure Act, which mandates uniformity and openness in federal agencies' procedures; and the Federal Advisory Committee Act, which governs the initiation and operation of advisory committees in the executive branch of the federal government.

Individual regulations, codes, and standards are described in detail in Chapters 3 through 15, which discuss the proposed action's effects on specific resources.

Public and Agency Involvement

Public disclosure and dialogue are priorities under both NEPA and CEQA. Both laws mandate specific periods during the compliance process when public and agency comments on the proposed action and draft EIS (or EIR) document are solicited: during the scoping comment period, during the review period for the draft document, and during the release of the final EIS/EIR document. Lead agencies are also encouraged to hold public meetings or hearings to review the draft version of the document. Brief descriptions of these milestones are provided below, as they apply to this document.

Scoping Comment Period

Scoping refers to the public outreach process used under NEPA and CEQA to determine the coverage and content of an EIS or EIR. The scoping comment period offers an important opportunity for public review and comment in the early phases of project development. Scoping contributes to the selection of a range of alternatives to be considered, and can also help to establish methods of analysis, identify the environmental effects that will be considered in detail, and develop mitigation measures to avoid or compensate for adverse effects. The scoping process for an EIS is initiated by publication of the Notice of Intent (NOI) required by NEPA, which is a formal announcement to the public and to interested agencies and organizations that an EIS is in preparation; similarly, CEQA requires the lead agency to issue a Notice of Preparation (NOP) announcing the beginning of the EIR process. During the scoping period, agencies and the public are invited to comment on the proposed action, the approach to environmental analysis, and any issues of concern.

USFWS published the NOI for this document in the Federal Register on March 25, 2004 and DFG submitted the corresponding NOP to the State Clearinghouse on March 26, 2004, initiating the 30-day public scoping period required by NEPA and CEQA. Consistent with NEPA and CEQA requirements, the NOI and NOP provided information on the background and purpose of the proposed action; announced preparation of and requested public comment on the EIS/EIR; and provided information on the public scoping meetings to be held in support of the EIS/EIR. Appendix A contains the full text of both notices.

USFWS and DFG held two public scoping meetings for the proposed action in April 2004. To maximize public access to the meetings, one meeting was held in Stockton and the other in Fresno. Both meetings were advertised in local newspapers (the *Fresno Bee* and *Stockton Record*) and via direct mailing to interested parties.

The scoping meetings used an informal workshop format with informational handouts and personnel available to discuss the proposed action and alternatives with attendees. Attendees were greeted on arrival and asked to sign an attendance record form listing their name, address, and affiliation (if any), and indicating whether they would like to be added to a project mailing list. Each guest was also given the option to provide written comments or concerns s/he would like addressed in the EIS/EIR and was provided with a comment form; attendees had the option of completing the form at the meeting or mailing it to USFWS prior to the close of the scoping period (April 26, 2004).

Public and Agency Review of EIS/EIR

Once a draft EIS or EIR is complete, the lead agency is required to notify agencies and the public that it is available for review. The official notification is referred to as a Notice of Availability (NOA) under NEPA and a Notice of Completion (NOC) under CEQA. The NOA is sent to the U.S. Environmental Protection Agency for publication in the *Federal Register*. The NOC is sent to the State Clearinghouse; CEQA also requires that the lead agency provide written notice of the draft document's availability to the County Clerk's office for posting, as well as publishing it in a general-circulation newspaper, posting it on and off the project site, or mailing it to residents of properties adjacent to the project site. Issuance of the NOA/NOC initiates a public review period, during which the lead agency receives and collates public and agency comments on the proposed action and the document.

USFWS and DFG are now circulating this draft EIS/EIR for a 90-day public review and comment period, and will also hold a public meeting to present the results of the EIS/EIR analyses and solicit comments in person. The purpose of public circulation and the public meeting is to provide agencies and interested individuals with opportunities to comment on or express concerns regarding the contents of the draft EIS/EIR.

Preparation of Final EIS/EIR

Before the lead agency can approve a proposed action, it must prepare a final EIS/EIR that addresses all comments received on the draft document. The final EIS/EIR must include a list of all individuals, organizations, and agencies that provided comments, and must contain copies of all comments received during the public review period, along with the lead agency's responses. The final EIS/EIR is expected to be available in mid-2006.

Issues Identified in Scoping Comments

As discussed above, one of the purposes of the scoping process under both NEPA and CEQA is to identify any areas of controversy or public concern related to a proposed project. Both CEQA and NEPA require that an EIR/EIS identify issues of known controversy, if any exist. However, despite the premeeting outreach conducted by USFWS and DFG, attendance at the scoping meetings for the proposed action was sparse, and very few comments were received during the scoping period (see Appendix A). The single comment letter received stressed the breadth and complexity of the conservation effort entailed by the proposed action, the number of species and diversity of habitats involved, and the need to ensure that PG&E's conservation planning is consistent with existing recovery plans for species covered by the HCP. No other areas of specific public or agency concern have been identified at this time.

Contents of this EIS/EIR

EIS/EIR Organization

In addition to this introduction, this EIS/EIR contains chapters that describe the proposed action and alternatives; discuss the proposed action's likely effects on key resources in the San Joaquin Valley area; and evaluate its potential to contribute to cumulative regional concerns and to foster growth. It also includes a list of the people involved in preparing the document and a copy of the EIS/EIR distribution list. Table 1-2 provides a chapter-by-chapter overview.

Table 1-2. Organization of this Draft Environmental Impact Statement/Environmental Impact Report

Chapter	Contents	Chapter	Contents
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Chapter	Contents	Chapter	Contents
5	Biological Resources	18	Cumulative Effects
6	Aesthetics	19	Growth Inducement and Related Effects
7	Geology and Soils	20	Environmental Sustainability
8	Water Resources	21	Comparison of Alternatives
9	Cultural Resources	22	List of EIS Preparers
10	Paleontological Resources	23	EIS/EIR Recipients
11	Transportation and Circulation	Appendix A	NOI, NOP, Scoping Comments
12	Noise and Vibration	Appendix B	Draft San Joaquin Valley O&M HCP
13	Air Quality	Appendix C	Acronyms and Abbreviations (11 x 17 foldout)

Geographic Area Analyzed in this EIS/EIR

Analyses presented in this EIS/EIR focus on the geographic area expected to experience direct and indirect effects as a result of the activities enabled under the proposed action. This area—referred to herein as the *action area*—includes part or all of nine San Joaquin Valley counties: San Joaquin, Stanislaus, Merced, Fresno, Kings, Kern, Mariposa, Madera, and Tulare, as shown in Figure 1-1. The north boundary is the northern San Joaquin County line, and the south boundary is the 3,000-foot elevation contour north of the Kern County line. The east boundary coincides with the San Joaquin and Stanislaus County lines to the south edge of Stanislaus County and then follows the perimeter of federal lands or the 3,000-foot elevation contour, whichever is lower, along the flank of the Sierra Nevada. The west boundary of the action area is defined by the west boundaries of San Joaquin, Stanislaus, Merced, Fresno, Kings, and Kern Counties along the margin of the San Joaquin Valley.

The action area was defined to include all directly affected lands and a substantial additional buffer to ensure that indirect effects on all resources could be thoroughly analyzed. Its boundaries were based on the extent of the area covered by the proposed San Joaquin Valley O&M HCP. The proposed action would not enable any activities outside these boundaries, and only a small percentage of the lands within the action area boundary would be actually be subject to O&M and minor construction enabled under the proposed action. O&M activities would be limited to existing PG&E rights-of-way (ROWs) and immediately adjacent lands, while minor construction projects could require the acquisition of small acreages of additional ROW, but would also be very restricted in extent.

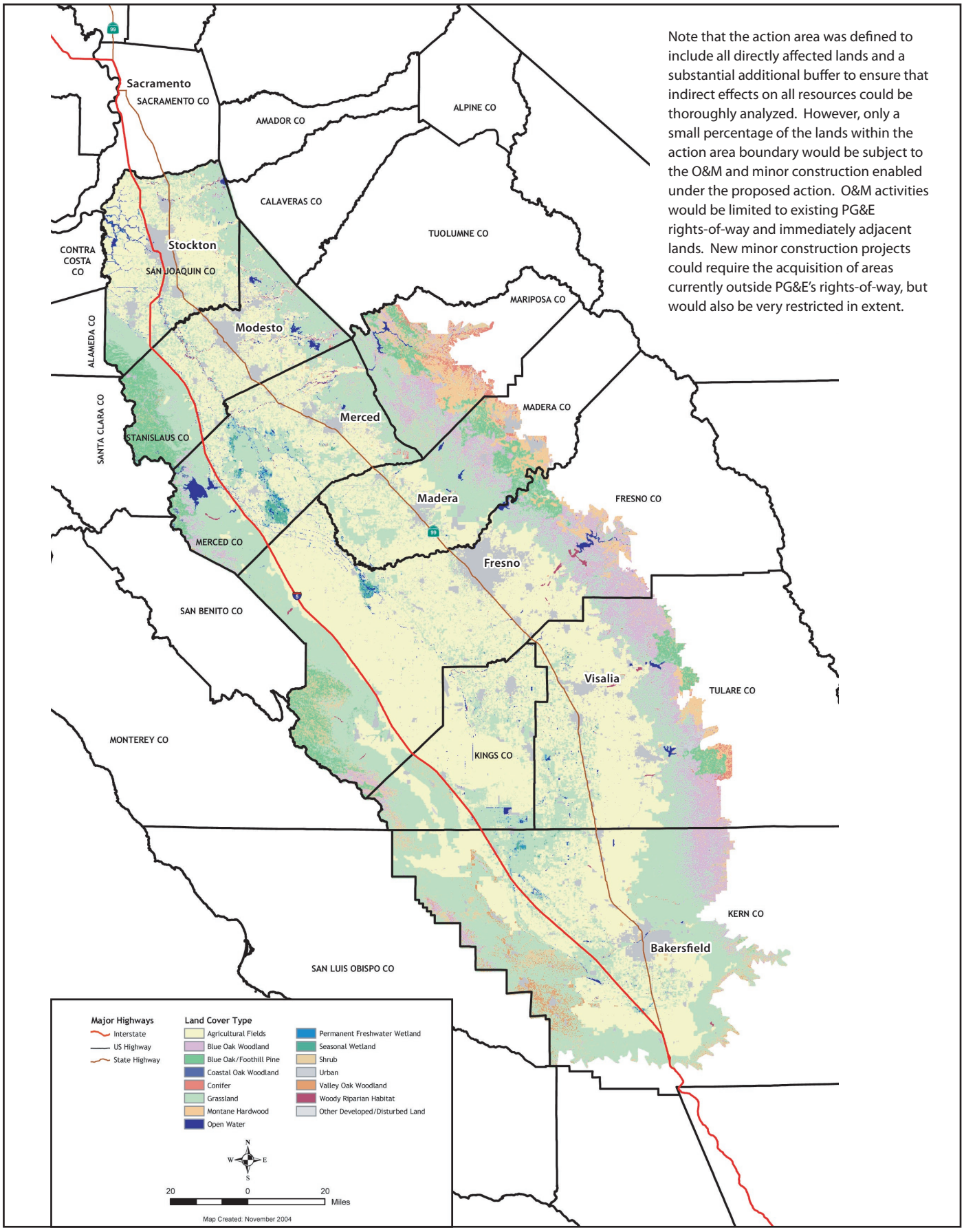
Thresholds of Significance and Level of Effect

As identified in *Joint Compliance Approach* above, this document is intended to meet the requirements of both NEPA and CEQA. CEQA requires an EIR to identify "significant" impacts—that is, impacts that exceed a recognized threshold of severity and thus require *mitigation*, measures or activities adopted to avoid the impact, reduce its severity, or compensate for it. NEPA embodies a similar requirement that an EIS identify approaches for mitigating adverse environmental effects.

Each chapter in this EIS/EIR identifies the criteria used to assess the proposed action's level of effect on the resource discussed in that chapter. Significance criteria used in these analyses drew on both NEPA and CEQA standards; where standards differ, the more rigorous threshold was applied. This ensures that the criteria applied in the analyses are adequate under both federal and state regulations and that the mitigation measures identified will similarly meet both standards.

To provide the degree of specificity required by CEQA, the following terminology is used to evaluate the level of significance of impacts discussed in this EIS/EIR. This usage is consistent with generally accepted standards of CEQA compliance practice.

- A finding of *no impact* is made when the analysis concludes that the proposed action would not affect the particular environmental resource.
- An impact is considered *less than significant* if the analysis concludes that there would be no substantial adverse change in the environment and that no mitigation is needed.
- An impact is considered *less than significant with mitigation* if the analysis concludes that there would be no substantial adverse change in the environment with the inclusion of the mitigation measure(s) described.
- An impact is considered *significant* or *potentially significant* if the analysis concludes that there could be a substantial adverse effect on the environment.
- An impact is considered *significant and unavoidable* if the analysis concludes that there could be a substantial adverse effect on the environment, and no feasible mitigation measures are available to reduce the impact to a less-than-significant level.
- An impact is considered *beneficial* if the analysis concludes that there would be a positive change in the environment.



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Jones & Stokes

Figure 1-1
Extent of Action Area, Showing County Boundaries and Land Cover Types